



Under the Paperwork Reduction Act of 1995 no Person is required to respond to a collection of information unless it contains a valid OMR control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Shee

1

4

Complete if Known

Application Number	10/539,208
Filing Date	MAY 24, 2006
First Named Inventor	DAVID RAAB
Art Unit	1644
Examiner Name	NOT YET ASSIGNED
Attorney Docket Number	B&B-135

U. S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ "Number ⁴ "Kind Code ⁵ (if known)				
	2	WO 98/34640	08/13/1998	MERCK & CO., INC.		
	3	WO 00/42560	07/20/2000	MAXYGEN, INC.		
	4	DE 199 14 808 A1	10/19/2000	RAUHE, HILMAR		
	5	WO 01/16810 A2	03/08/2001	THE EUROPEAN MOLECULAR BIOLOGY LAB.		
	6	EP 1 156 112 A1	11/21/2001	GENEART GMBH		

Examiner Signature	/Shubo Zhou/	Date Considered	06/21/2010
--------------------	--------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

END TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22311-1450
ALL REFERENCES CONSIDERED EXCEPT WHERE LINES ARE STRUCK OUT
/S.Z./

Under the Paperwork Reduction Act of 1995 no Persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/539,208
(Use as many sheets as necessary)		Filing Date	MAY 24, 2006
		First Named Inventor	DAVID RAAB
		Art Unit	1644
		Examiner Name	NOT YET ASSIGNED
Sheet	2	of	4
Attorney Docket Number			

U. S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ "Number ⁴ "Kind Code ⁵ (if known)				
	7	WO 02/29088 A2	04/112002	TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA		

Examiner Signature	/Shubo Zhou/	Date Considered	06/21/2010
--------------------	--------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. American LegalNet, Inc.

END TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.Z./

Under the Paperwork Reduction Act of 1995 no Persons are required to respond to a collection of information unless it contains a valid OMR control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/539,208
Filing Date	MAY 24, 2006
First Named Inventor	DAVID RAAB
Art Unit	1644
Examiner Name	NOT YET ASSIGNED

Sheet

3

of

4

Attorney Docket Number

B&B-135

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	8	HOOVER DAVID M ET AL: "DNAWorks: an automated method for designing oligonucleotides for PCR-based gene synthesis" NUCLEIC ACIDS RESEARCH, OXFORD UNIVERSITY PRESS, SURREY, GB, Bd. 30, Nr. 10, 15. Mai 2002 (2002-05-15).	
	9	CHRISLAINE WITHERS-MARTINEZ ET AL: "PCR-based gene synthesis as an efficient approach for expression of the A+T-rich malaria genome" PROTEIN ENGINEERING, OXFORD UNIVERSITY PRESS, SURREY, GB, Bd. 12, Nr. 12, December 1999 (1999-12).	
	10	WILLIAMS D P ET AL: "DESIGN, SYNTHESIS AND EXPRESSION OF A HUMAN INTERLEUKIN-2 GENE INCORPORATING THE CONDON USAGE BIAS FOUND IN HIGHLY EXPRESSED ESCHERICHIA COLI GENES" NUCLEIC ACIDS RESEARCH,	
		OXFORD UNIVERSITY PRESS, SURREY, GB, Bd. 16, Nr. 22, 25 November 1988 (1988-11-25).	
	11	LEE F ET AL: "ISOLATION OF COMPLEMENTARY DNA FOR A HUMAN GRANULOCYTE-MACROPHAGE COLONY-STIMULATING FACTOR BY FUNCTIONAL EXPRESSION IN MAMMALIAN CELLS" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Bd. 82, Nr. 13, 1985.	
	12	MEAZZA R ET AL: "Identification of a novel interleukin-15 (IL-15) transcript isoform generated by alternative splicing in human small cell lung cancer cell lines." ONCOGENE. 16 MAY 1996, Bd. 12, Nr. 10, 16. Mai 1996 (1996-05-16).	
	13	SINCLAIR, G. & CHOY, F.Y.: Synonymous codon usage bias and the expression of human glucocerebrosidase in the methylotrophic yeast, Pichia pastoris. Protein Expr. Purif. (October 2002) 26 (1) 96-105.	
	14	HAMDAN, F.F. et al.: Codon optimization improves heterologous expression of a Schistosoma mansoni cDNA in HEK293 cells. Parasitol. Res. (June 2002) 88 (6) 583-6.	
	15	DEML, L. et al.: Multiple effects of codon usage optimization on expression and immunogenicity of DNA candidate vaccines encoding the human immunodeficiency virus type 1 Gag protein. J. Virol. (2001) 75 (22) 10991-1001	

Examiner Signature	/Shubo Zhou/	Date Considered	06/21/2010
--------------------	--------------	-----------------	------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.Z./

Under the Paperwork Reduction Act of 1995 no Persons are required to respond to a collection of information unless it contains a valid OMR control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 4

of 4

Complete if Known	
Application Number	10/539,208
Filing Date	MAY 24, 2006
First Named Inventor	DAVID RAAB
Art Unit	1644
Examiner Name	NOT YET ASSIGNED

Attorney Docket Number B&B-135

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	16	HALE, R.S. & THOMPSON, G.: Codon optimization of the gene encoding a domain from human type 1 neurofibromin protein results in a threefold improvement in expression level in <i>Escherichia coli</i> . <i>Protein Expr. Purif.</i> (1998) 12 (2) 185-8.	
	17	HUMPHREYS, D.P. et al.: High-level periplasmic expression in <i>Escherichia coli</i> using a eukaryotic signal peptide: importance of codon usage at the 5' end of the coding sequence. <i>Protein Expr. Purif.</i> (2000) 20 (2) 252-64	
	18	KIM, C.H. et al.: Codon optimization for high-level expression of human erythropoietin (EPO) in mammalian cells. <i>Gene</i> (1977) 199 (1-2) 293-301	

Examiner Signature	/Shubo Zhou/	Date Considered	06/21/2010
--------------------	--------------	-----------------	------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.Z./